

Analysis of the 2011 California Survey of On-Highway Motorcycles

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Table of Contents

| | |
|---------------------------------------|----|
| Table of Tables | 3 |
| Section 1: Methodology | 4 |
| Sample Selection | 4 |
| Interview Summary | 5 |
| Section 2: Key Findings | 8 |
| Section 3: Summary of Responses | 9 |
| Appendix A: Survey Instrument | 18 |

Table of Tables

| | |
|---|----|
| Table 1. Survey Response Rate | 6 |
| Table 2. Age Distribution for Survey Respondents | 6 |
| Table 3. Gender Distribution for Survey Respondents | 6 |
| Table 4. County Distribution for Survey Sampling Frame, Survey Sample, & Survey Respondents | 7 |
| Table 5. Distribution of Respondents with a Motorcycle Using a Carburetor or Fuel Injection..... | 9 |
| Table 6. Distribution of Respondents with a Motorcycle Using Gasoline, Diesel, or Electricity | 9 |
| Table 7. Number of Days Respondents Used Motorcycles in the Past 12 Months | 9 |
| Table 8. Number of Times Respondents Started Motorcycles on a Typical Day of Use..... | 10 |
| Table 9. Number of Miles Respondents Rode Motorcycles on a Typical Day of Use | 10 |
| Table 10. Distribution of Respondents Using Motorcycles Primarily for Commuting, Recreation, or Both | 10 |
| Table 11. Distribution of Respondents Typically Riding Motorcycles Weekdays Only, Weekends Only, or Both | 11 |
| Table 12. Distribution of Motorcycle Use on Weekends Versus Weekdays..... | 11 |
| Table 13. Number of Respondents Who Used Motorcycles per Season | 11 |
| Table 14. Distribution of Motorcycle Use across Seasons | 12 |
| Table 15. Distribution of Respondents Using Motorcycles Primarily In-state, Out-of-state, or Both | 12 |
| Table 16. Distribution of Motorcycle Use In-state Versus Out-of-state | 13 |
| Table 17. Distribution of Motorcycle Fuel Tank Sizes..... | 13 |
| Table 18. Number of Motorcycles with Fuel, How Much Fuel, and without Fuel | 14 |
| Table 19. Distribution of Respondents Storing Motorcycles Inside and Outside | 14 |
| Table 20. Distribution of Respondents Storing Motorcycles Inside Garages, Sheds, or Other Locations .. | 14 |
| Table 21. Distribution of Respondents Storing Motorcycles in Garages with and without Insulation | 15 |
| Table 22. Distribution of Respondents Storing Motorcycles Outside Under Patio Covers, Motorcycle Covers, or Other Types of Cover | 15 |
| Table 23. Distribution of Respondents Who Modified Motorcycles' Original Design | 15 |
| Table 24. Number of Respondents Who Modified Motorcycles by Adding Exhausts with Catalysts | 15 |
| Table 25. Number of Respondents Who Modified Motorcycles by Adding Exhausts without Catalysts ... | 16 |
| Table 26. Number of Respondents Who Modified Motorcycles by Removing the Carbon Canister | 16 |
| Table 27. Distribution of Respondents Who Made Other Modifications | 16 |
| Table 28. Number of Respondents Who Reported Owning and Using a 2 nd Motorcycle in the Past 12 Months..... | 16 |
| Table 29. Number of Respondents Who Completed Interviews about a 2 nd Motorcycle Owned and Used in the Past 12 Months..... | 17 |

Section 1: Methodology

The Institute for Social Research (ISR) at California State University, Sacramento conducted a randomized computer assisted telephone interview (CATI) with owners and users of registered on-road motorcycles throughout California. The data was collected in an effort to provide the California Air Resources Board (ARB) with information about the usage and storage of registered on-road motorcycles in California.

Sample Selection

The Air Resources Board (ARB) in collaboration with the California Department of Motor Vehicles (DMV) obtained the most recent 2010 registration information for California's on-road motorcycle population. It should be noted that 15 percent of the 2010 DMV records were still pending registration status, and therefore were not included in the sampling frame. Because the success of a telephone survey depends on having the most up to date contact and registration information available, it was agreed that contacting households with the data available (although only 85% complete) would yield more accuracy, better survey results, and higher data quality than using more outdated 2009 DMV registration records.

The ISR received an initial database of 588,541 DMV records of owners of on-road motorcycles. To ensure the sample would be representative of the population, a multi-step process was undertaken to identify and remove records in the DMV population that did not meet ARB's definition of registered, on-road motorcycles. The sorting process identified 117,790 records in the population data that required removal, resulting in a final sampling frame of 470,751 records of owners of registered, on-road motorcycles in California that were eligible to take the survey. DMV records were removed from the sample if they were coded in the data dictionaries provided by ARB as:

- Not currently registered (-1,837 cases)
- Registered out of state (-3, 414 cases)
- Registered to commercial, public, government, living trusts or other non-residential entities (-22,436)
- Cars, trucks, marine crafts, trailers, or off-road motorcycles (-67,476 cases)
- Duplicate records for a registered owner (-22,627 cases)

The DMV registration records contained the name and addresses of registered owners, but did not contain a telephone number. ISR worked with Scientific Telephone Samples (STS) to match the names and addresses in the DMV records to an STS database in an effort to obtain current and accurate telephone numbers. A random sample of 55,000 records was sent to STS for matching. Twenty-nine percent of those records, or 15,768 phone numbers, were matched and appended to the DMV records. After removing duplicate phone numbers, the final sample for the study was 15,506 records. The survey was conducted using WinCATI software from Sawtooth Technologies. The use of CATI helps increase the accuracy of responses collected and supports efforts to maximize the response rate. This is achieved through CATI's ability to automate the flow of the questionnaire while minimizing potential data entry errors by restricting accepted answers. Initial call attempts are random, and the non-

response rate is reduced by systematically working through the sample to reach potential respondents. Subsequent call attempts are distributed to ensure that numbers are not called during the same time of day, or on the same day of the week until a final disposition can be reached.

Interview Summary

Complete Interviews

The analysis outlined in this report is based on telephone interviews conducted from June 11th, 2011 to June 29th, 2011. The objective of the study was to collect 1,200 completed interviews with the registered owner or primary user of the on-road motorcycle specified in the DMV sampling frame. ISR exceeded the goal and completed a total of 1,228 completed interviews with registered owners of on-road motorcycles in California—a completed response rate of over 76 percent (Table 1). Of the 1,228 individuals who participated in the study, most (92%) identified themselves as the registered owner of the motorcycle. The remaining eight percent of completed surveys were conducted with another person in the household who was most familiar and used the motorcycle. The distribution of the survey respondents by county can be found in Table 5. Table 5 displays comparisons between the sampling frame (N=470, 751), the sample (N=15, 506), and the survey responses (N=1,228). Section 2 of this report describes the responses to the survey questions.

Incomplete Interviews

There were 274 (17%) registered owners who initially agreed to take the survey, but failed to complete the interview questionnaire for various reasons (Table 1). These data are defined in this report as “incomplete interviews.” Data from incomplete interviews have been omitted from the analysis because of concerns regarding data quality and completion, however, the data is accessible in the Excel file provided to ARB.

Second Motorcycle Data

In addition to the 1,228 completed interviews, data was also collected on respondents who agreed to discuss a second motorcycle they owned and operated. These data are a combination of individuals who completed the first interview about the motorcycle specified in the DMV sampling frame as well as individuals who no longer owned the motorcycle being asked about, and instead completed the interview about a different motorcycle now in their possession, but not specified in the DMV sampling frame. However, it should be noted that the data collected on second motorcycles are not reflective of the DMV sampling frame, and therefore is not necessarily generalizable the larger population of registered, on-road motorcycles found in the DMV sampling frame.

Table 1. Survey Response Rate

| Disposition | Percent | Number of Cases |
|------------------------------------|---------|-----------------|
| Complete Interviews | 76.2% | 1,228 |
| Incomplete Interviews ^a | 17.0% | 274 |
| Refusals | 6.8% | 110 |
| Total | 100% | 1,612 |

^a All data from incomplete interviews was omitted from the analysis.

Table 2. Age Distribution for Survey Respondents

| Response | Percent | Number of Responses |
|-------------------|---------|---------------------|
| 16-17 | 0.3% | 4 |
| 18-24 | 3.0% | 37 |
| 25-44 | 15.2% | 187 |
| 45-64 | 60.1% | 738 |
| 65+ | 19.6% | 241 |
| Declined to State | 1.7% | 21 |
| Total | 100% | 1,228 |

Table 3. Gender Distribution for Survey Respondents

| Response | Percent | Number of Responses |
|-------------------|---------|---------------------|
| Male | 83.0% | 1,019 |
| Female | 16.5% | 203 |
| Declined to State | .5% | 6 |
| Total | 100% | 1,228 |

Table 4. County Distribution for Survey Sampling Frame, Survey Sample, & Survey Respondents

| County | Survey Sampling Frame of Registered Owners ^a | | Survey Sample of Registered Owners ^b | | Survey Respondents | |
|-----------------|---|---------|---|---------|--------------------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Alameda | 18,048 | 3.8% | 659 | 4.2% | 42 | 3.4% |
| Alpine | 27 | 0.0% | 1 | 0.0% | 1 | 0.1% |
| Amador | 1,239 | 0.3% | 29 | 0.2% | 2 | 0.2% |
| Butte | 4,324 | 0.9% | 143 | 0.9% | 14 | 1.1% |
| Calaveras | 1,590 | 0.3% | 44 | 0.3% | 8 | 0.7% |
| Colusa | 268 | 0.1% | 5 | 0.0% | 0 | 0.0% |
| Contra Costa | 15,089 | 3.2% | 509 | 3.3% | 37 | 3.0% |
| Del Norte | 495 | 0.1% | 15 | 0.1% | 1 | 0.1% |
| El Dorado | 5,028 | 1.1% | 188 | 1.2% | 17 | 1.4% |
| Fresno | 12,339 | 2.6% | 394 | 2.5% | 32 | 2.6% |
| Glenn | 496 | 0.1% | 26 | 0.2% | 5 | 0.4% |
| Humboldt | 3,032 | 0.6% | 125 | 0.8% | 18 | 1.5% |
| Imperial | 1,236 | 0.3% | 42 | 0.3% | 0 | 0.0% |
| Inyo | 565 | 0.1% | 24 | 0.2% | 4 | 0.3% |
| Kern | 11,473 | 2.4% | 375 | 2.4% | 31 | 2.5% |
| Kings | 1,880 | 0.4% | 65 | 0.4% | 6 | 0.5% |
| Lake | 1,900 | 0.4% | 55 | 0.4% | 5 | 0.4% |
| Lassen | 661 | 0.1% | 6 | 0.0% | 1 | 0.1% |
| Los Angeles | 82,245 | 17.5% | 2,774 | 17.9% | 173 | 14.1% |
| Madera | 2,511 | 0.5% | 79 | 0.5% | 8 | 0.7% |
| Marin | 3,861 | 0.8% | 136 | 0.9% | 6 | 0.5% |
| Mariposa | 646 | 0.1% | 26 | 0.2% | 3 | 0.2% |
| Mendocino | 2,351 | 0.5% | 75 | 0.5% | 10 | 0.8% |
| Merced | 3,258 | 0.7% | 111 | 0.7% | 10 | 0.8% |
| Modoc | 140 | 0.0% | 2 | 0.0% | 0 | 0.0% |
| Mono | 375 | 0.1% | 11 | 0.1% | 1 | 0.1% |
| Monterey | 4,908 | 1.0% | 184 | 1.2% | 14 | 1.1% |
| Napa | 2,268 | 0.5% | 109 | 0.7% | 8 | 0.7% |
| Nevada | 3,166 | 0.7% | 141 | 0.9% | 19 | 1.5% |
| Orange | 32,804 | 7.0% | 1,086 | 7.0% | 64 | 5.2% |
| Placer | 7,625 | 1.6% | 223 | 1.4% | 19 | 1.5% |
| Plumas | 585 | 0.1% | 18 | 0.1% | 4 | 0.3% |
| Riverside | 26,481 | 5.6% | 905 | 5.8% | 60 | 4.9% |
| Sacramento | 19,919 | 4.2% | 564 | 3.6% | 54 | 4.4% |
| San Benito | 1,284 | 0.3% | 39 | 0.3% | 4 | 0.3% |
| San Bernardino | 26,551 | 5.6% | 779 | 5.0% | 52 | 4.2% |
| San Diego | 41,208 | 8.8% | 1,102 | 7.1% | 68 | 5.5% |
| San Francisco | 9,038 | 1.9% | 228 | 1.5% | 14 | 1.1% |
| San Joaquin | 9,429 | 2.0% | 297 | 1.9% | 31 | 2.5% |
| San Luis Obispo | 6,383 | 1.4% | 249 | 1.6% | 37 | 3.0% |
| San Mateo | 9,155 | 1.9% | 326 | 2.1% | 22 | 1.8% |
| Santa Barbara | 6,441 | 1.4% | 220 | 1.4% | 22 | 1.8% |
| Santa Clara | 21,954 | 4.7% | 754 | 4.9% | 51 | 4.2% |
| Santa Cruz | 5,385 | 1.1% | 185 | 1.2% | 19 | 1.5% |
| Shasta | 5,372 | 1.1% | 207 | 1.3% | 27 | 2.2% |
| Sierra | 75 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Siskiyou | 1,175 | 0.2% | 41 | 0.3% | 8 | 0.7% |
| Solano | 7,662 | 1.6% | 267 | 1.7% | 20 | 1.6% |
| Sonoma | 9,966 | 2.1% | 370 | 2.4% | 26 | 2.1% |
| Stanislaus | 7,884 | 1.7% | 276 | 1.8% | 29 | 2.4% |
| Sutter | 1,480 | 0.3% | 58 | 0.4% | 6 | 0.5% |
| Tehama | 1,199 | 0.3% | 45 | 0.3% | 9 | 0.7% |
| Trinity | 458 | 0.1% | 18 | 0.1% | 3 | 0.2% |
| Tulare | 5,588 | 1.2% | 199 | 1.3% | 19 | 1.5% |
| Tuolumne | 1,906 | 0.4% | 65 | 0.4% | 7 | 0.6% |
| Ventura | 14,318 | 3.0% | 508 | 3.3% | 40 | 3.3% |
| Yolo | 2,608 | 0.6% | 80 | 0.5% | 8 | 0.7% |
| Yuba | 1,399 | 0.3% | 44 | 0.3% | 5 | 0.4% |
| Don't Know | -- | -- | -- | -- | 11 | 0.9% |
| Refused | -- | -- | -- | -- | 13 | 1.1% |
| Total | 470,751 | 100% | 15,506 | 100% | 1,228 | 100% |

^a Sampling frame provided by the State of California, Department of Motor Vehicles.^b Random sample drawn by ISR.

Section 2: Key Findings

- Of the qualified owners contacted, 76.2 percent (1,228) completed the interview. Less than seven percent (6.8%) of all respondents who qualified for the survey refused to be interviewed. **(Table 1)**
- The majority of respondents (60.1%) who completed interviews were between 45 and 64 years of age. Less than five percent (3.3%) of all respondents were under 24 years of age. **(Table 2)**
- Approximately four of every five respondents (83.0%) who agreed to be surveyed were male. **(Table 3)**
- Nearly all of the respondents (99.7%) reported using gasoline for their motorcycle as opposed to diesel (0.2%). No electric motorcycles were reported to be owned or used. **(Table 6)**
- More than three-quarters (78.5%) of respondents reported starting the motorcycle between one and five times on a typical day of use. **(Table 8)**
- Over one-half (56.5%) of all respondents reported riding the motorcycle 50 miles or less on a typical day of use. **(Table 9)**
- Slightly more than half of respondents (55.6%) reported using the motorcycle for recreation only, while slightly less than ten percent (9.9%) of respondents discussed using the motorcycle primarily for commuting. Over one-third (33.8%) of all respondents reported using the motorcycle for both recreation and commuting. **(Table 10)**
- Over 90 percent (93.4%) of all respondents reported using the motorcycle during summer, followed by spring at more than 80 percent (83.2%). Although it was less common, more than half (54.3%) of all respondents reported using the motorcycle in the winter, and nearly 70 percent (68.0%) reported using their motorcycle in fall. **(Table 13)**
- Less than one percent (.9%) of respondents reported using the motorcycle primarily out-of-state. **(Table 15)**
- The average fuel tank size reported for motorcycles was 4.34 gallons. Interestingly, 'Don't Know' was a relatively high response for this question (11.7%). **(Table 17)**
- Approximately nine out of every ten respondents (90.1%) reported storing the motorcycle inside. **(Table 19)**
- More than one-half (56.2%) of all respondents reporting that the motorcycle was stored in a garage also reported that the garage where the motorcycle was stored had insulation. **(Table 21)**
- Over three-quarters (77.2%) of respondents reported that the motorcycle had not been modified from the original design. **(Table 23)**
- Slightly more than 70 percent (71.8%) of respondents who reported that the motorcycle had been modified also reported that the carbon canister had not been removed. **(Table 26)**

Section 3: Summary of Responses

Table 5. Distribution of Respondents with a Motorcycle Using a Carburetor or Fuel Injection

| Response | Percent | Number of Responses |
|----------------|---------|---------------------|
| Carburetor | 44.8% | 550 |
| Fuel Injection | 43.2% | 531 |
| Don't Know | 12.0% | 147 |
| Total | 100% | 1,228 |

Table 6. Distribution of Respondents with a Motorcycle Using Gasoline, Diesel, or Electricity

| Response | Percent | Number of Responses |
|-------------|---------|---------------------|
| Gasoline | 99.7% | 1,224 |
| Diesel | 0.2% | 3 |
| Electricity | 0.0% | 0 |
| Don't Know | 0.1% | 1 |
| Total | 100% | 1,228 |

Table 7. Number of Days Respondents Used Motorcycles in the Past 12 Months

| Response ^a | Percent | Number of Responses |
|-----------------------|-------------------|---------------------|
| 1-25 | 38.8% | 476 |
| 26-50 | 16.2% | 199 |
| 51-75 | 7.2% | 88 |
| 76-100 | 6.8% | 84 |
| 101-150 | 5.6% | 69 |
| 151-200 | 7.2% | 88 |
| 201 -300 | 7.6% | 93 |
| 301+ | 5.2% | 64 |
| Don't Know | 5.3% | 65 |
| Refused | 0.2% | 2 |
| Total | 100% ^b | 1,228 |

^a Responses are displayed in ranges, however respondents reported exact numbers.

^b Due to rounding percentages may not sum to 100%.

Table 8. Number of Times Respondents Started Motorcycles on a Typical Day of Use

| Response ^a | Percent | Number of Responses |
|-----------------------|-------------------|---------------------|
| 1-5 ^b | 78.5% | 964 |
| 6-10 | 10.5% | 129 |
| 11-20 | 2.3% | 28 |
| 21-40 | 0.7% | 8 |
| 41-60 ^c | 0.6% | 7 |
| 61-100 ^c | 1.0% | 12 |
| 101-200 ^c | 0.7% | 8 |
| 201-300 ^c | 0.8% | 10 |
| 301+ ^c | 0.1% | 1 |
| Don't Know | 4.7% | 58 |
| Refused | 0.2% | 3 |
| Total | 100% ^d | 1,228 |

^a Responses are displayed in ranges, however respondents reported exact numbers.

^b Some respondents chose '1' as the number of times they start the motorcycle on a typical day of use (N=74). These responses should be interpreted with caution because one start does not allow for any engine stoppage before the motorcycle is returned to a place of storage.

^c There is reason to believe some of the responses were intended for the whole year as opposed to one typical day of use. This concern was raised due to the large number of starts some respondents reported on a typical day of use. The confusion may have arisen from the previous question, which asked for the number of days the respondent used the motorcycle in the past 12 months.

^d Due to rounding percentages may not sum to 100%.

Table 9. Number of Miles Respondents Rode Motorcycles on a Typical Day of Use

| Response ^a | Percent | Number of Responses |
|-----------------------|-------------------|---------------------|
| 0-50 | 56.5% | 694 |
| 51-100 | 20.4% | 250 |
| 101-150 | 4.7% | 58 |
| 151-200 | 2.9% | 35 |
| 201-250 | 0.7% | 9 |
| 251-300 | 1.6% | 20 |
| 301-350 | 0.3% | 4 |
| 351+ | 1.6% | 20 |
| Don't Know | 10.9% | 134 |
| Refused | 0.3% | 4 |
| Total | 100% ^b | 1,228 |

^a Responses are displayed in ranges, however respondents reported exact numbers.

^b Due to rounding percentages may not sum to 100%.

Table 10. Distribution of Respondents Using Motorcycles Primarily for Commuting, Recreation, or Both

| Response | Percent | Number of Responses |
|------------|---------|---------------------|
| Commuting | 9.9% | 122 |
| Recreation | 55.6% | 683 |
| Both | 33.8% | 415 |
| Don't Know | 0.7% | 8 |
| Total | 100% | 1,228 |

Table 11. Distribution of Respondents Typically Riding Motorcycles Weekdays Only, Weekends Only, or Both

| Response | Percent | Number of Responses |
|------------|-------------------|---------------------|
| Weekdays | 14.5% | 178 |
| Weekends | 26.4% | 324 |
| Both | 58.5% | 718 |
| Don't Know | 0.7% | 8 |
| Total | 100% ^a | 1,228 |

^a Due to rounding percentages may not sum to 100%.

Table 12. Distribution of Motorcycle Use on Weekends Versus Weekdays

| Weekends ^a | Percent | Number of Responses | Weekdays ^a | Percent | Number of Responses |
|-----------------------|-------------------|---------------------|-----------------------|-------------------|---------------------|
| 1-15% ^b | 2.1% | 15 | 1-15% ^b | 1.3% | 9 |
| 16-30% | 9.1% | 65 | 16-30% | 12.0% | 86 |
| 31-45% | 4.9% | 35 | 31-45% | 4.6% | 33 |
| 46-60% | 70.5% | 506 | 46-60% | 70.9% | 509 |
| 61-75% | 8.4% | 60 | 61-75% | 6.0% | 43 |
| 76-90% | 4.9% | 35 | 76-90% | 5.3% | 38 |
| 91-99% ^c | 0.3% | 2 | 91-99% ^c | 0.0% | 0 |
| Total | 100% ^c | 718 | Total | 100% ^c | 718 |

^a Responses are displayed in ranges, however respondents reported exact percentages.

^b Only respondents who reported riding their motorcycles on both weekdays and weekends are included in this distribution, therefore 0% and 100% are excluded from this table.

^c Due to rounding percentages may not sum to 100%.

Table 13. Number of Respondents Who Used Motorcycles per Season

| Season | Selected Response | | Did Not Select Response | | Total | |
|------------|-------------------|---------------------|-------------------------|---------------------|---------|---------------------|
| | Percent | Number of Responses | Percent | Number of Responses | Percent | Number of Responses |
| Winter | 54.3% | 667 | 45.7% | 561 | 100% | 1,228 |
| Spring | 83.2% | 1,022 | 16.8% | 206 | 100% | 1,228 |
| Summer | 93.4% | 1,147 | 6.6% | 81 | 100% | 1,228 |
| Fall | 68.0% | 835 | 32.0% | 393 | 100% | 1,228 |
| Don't Know | 1.3% | 16 | 98.7% | 1,212 | 100% | 1,228 |

Table 14. Distribution of Motorcycle Use across Seasons

| Season | Response ^a | Percent | Number of Responses |
|--------|-----------------------|-------------------|---------------------|
| Winter | 0-19% | 56.8% | 698 |
| | 20-39% | 41.9% | 515 |
| | 40-59% | 0.5% | 6 |
| | 60-79% | 0.2% | 2 |
| | 80-100% | 0.6% | 7 |
| | Total | 100% | 1,228 |
| Spring | 0-19% | 18.7% | 230 |
| | 20-39% | 59.4% | 730 |
| | 40-59% | 18.6% | 229 |
| | 60-79% | 0.7% | 9 |
| | 80-100% | 2.4% | 30 |
| | Total | 100% ^b | 1,228 |
| Summer | 0-19% | 8.1% | 100 |
| | 20-39% | 51.2% | 629 |
| | 40-59% | 23.9% | 293 |
| | 60-79% | 2.7% | 33 |
| | 80-100% | 14.1% | 173 |
| | Total | 100% | 1,228 |
| Fall | 0-19% | 37.5% | 461 |
| | 20-39% | 56.9% | 699 |
| | 40-59% | 4.6% | 56 |
| | 60-79% | 0.2% | 3 |
| | 80-100% | 0.7% | 9 |
| | Total | 100% ^b | 1,228 |

^a Responses are displayed in ranges, however respondents reported exact percentages.

^b Due to rounding percentages may not sum to 100%.

Table 15. Distribution of Respondents Using Motorcycles Primarily In-state, Out-of-state, or Both

| Response | Percent | Number of Responses |
|--------------|-------------------|---------------------|
| In-state | 84.8% | 1,041 |
| Out-of-state | 0.9% | 11 |
| Both | 14.2% | 174 |
| Don't Know | 0.1% | 1 |
| Refused | 0.1% | 1 |
| Total | 100% ^a | 1,228 |

^a Due to rounding percentages may not sum to 100%.

Table 16. Distribution of Motorcycle Use In-state Versus Out-of-state

| Location | Response ^a | Percent | Number of Responses |
|--------------|-----------------------|-------------------|---------------------|
| In-state | 1-15% ^b | 0.0% | 0 |
| | 16-30% | 1.1% | 2 |
| | 31-45% | 1.7% | 3 |
| | 46-60% | 39.7% | 69 |
| | 61-75% | 19.0% | 33 |
| | 76-90% | 36.2% | 63 |
| | 91-99% ^c | 2.3% | 4 |
| | Total | 100% | 174 |
| Out-of-state | 1-15% ^b | 16.1% | 28 |
| | 16-30% | 40.2% | 70 |
| | 31-45% | 6.9% | 12 |
| | 46-60% | 35.6% | 62 |
| | 61-75% | 1.1% | 2 |
| | 76-90% | 0.0% | 0 |
| | 91-99% ^c | 0.0% | 0 |
| | Total | 100% ^c | 174 |

^a Responses are displayed in ranges, though respondents reported exact percentages.

^b Only respondents who reported riding their motorcycle both In-state and Out-of-state are included in this distribution, therefore 0% and 100% are excluded from this table.

^c Due to rounding percentages may not sum to 100%.

Table 17. Distribution of Motorcycle Fuel Tank Sizes

| Response ^a | Percent | Number of Responses |
|-----------------------|-------------------|---------------------|
| 1.00-1.99 | 3.0% | 37 |
| 2.00-2.99 | 9.8% | 120 |
| 3.00-3.99 | 16.3% | 200 |
| 4.00-4.99 | 20.8% | 255 |
| 5.00-5.99 | 28.3% | 347 |
| 6.00-6.99 | 7.0% | 86 |
| 7.00-7.99 | 1.9% | 23 |
| 8.00+ | 1.2% | 15 |
| Don't Know | 11.7% | 144 |
| Refused | 0.1% | 1 |
| Total | 100% ^b | 1,228 |

^a Responses are displayed in ranges, however respondents reported exact numbers.

^b Due to rounding percentages may not sum to 100%.

Table 18. Number of Motorcycles with Fuel, How Much Fuel, and without Fuel

| Question | Response | Percent | Number of Responses |
|---|------------|---------|---------------------|
| Does the motorcycle currently have fuel in the tank? | Yes | 95.0% | 1,167 |
| | No | 2.4% | 29 |
| | Don't Know | 2.6% | 32 |
| | Total | 100% | 1,228 |
| If 'Yes': Please estimate how full the motorcycle's fuel tank currently is. | 1/4 Full | 12.6% | 147 |
| | 1/2 Full | 29.7% | 347 |
| | 3/4 Full | 24.3% | 283 |
| | Full | 24.1% | 281 |
| | Don't Know | 9.3% | 109 |
| | Total | 100% | 1,167 |

Table 19. Distribution of Respondents Storing Motorcycles Inside and Outside

| Response | Percent | Number of Responses |
|------------|-------------------|---------------------|
| Inside | 90.1% | 1,106 |
| Outside | 9.3% | 114 |
| Don't Know | 0.5% | 6 |
| Refused | 0.2% | 2 |
| Total | 100% ^a | 1,228 |

^a Due to rounding percentages may not sum to 100%.

Table 20. Distribution of Respondents Storing Motorcycles Inside Garages, Sheds, or Other Locations

| Question | Response | Percent | Number of Responses |
|---|---------------------|-------------------|---------------------|
| Is the motorcycle stored inside a garage, shed, or other? | Garage | 89.6% | 991 |
| | Shed | 5.2% | 58 |
| | Other | 4.7% | 52 |
| | Don't Know | 0.3% | 3 |
| | Refused | 0.2% | 2 |
| | Total | 100% | 1,106 ^a |
| Where the motorcycle is stored if 'other' was chosen. | Backyard | 1.9% | 1 |
| | Barn | 1.9% | 1 |
| | Carport | 7.7% | 4 |
| | Dust cover | 1.9% | 1 |
| | Family room | 1.9% | 1 |
| | Living room | 1.9% | 1 |
| | Room | 1.9% | 1 |
| | Shop | 3.8% | 2 |
| | Storage locker | 1.9% | 1 |
| | Storage unit | 1.9% | 1 |
| | Trailer | 7.7% | 4 |
| | Underground parking | 1.9% | 1 |
| | Utility room | 1.9% | 1 |
| | Warehouse | 1.9% | 1 |
| | Workshop | 1.9% | 1 |
| | Unspecified | 57.7% | 30 |
| | Total | 100% ^b | 52 |

^a Only respondents who reported storing the motorcycle inside are included in this distribution.

^b Due to rounding percentages may not sum to 100%.

Table 21. Distribution of Respondents Storing Motorcycles in Garages with and without Insulation

| Response | Percent | Number of Responses |
|--------------------|---------|---------------------|
| With Insulation | 56.2% | 557 |
| Without Insulation | 33.9% | 336 |
| Don't Know | 9.7% | 96 |
| Refused | 0.2% | 2 |
| Total | 100% | 991 ^a |

^a Only respondents who reported storing the motorcycle inside a garage are included in this distribution.

Table 22. Distribution of Respondents Storing Motorcycles Outside Under Patio Covers, Motorcycle Covers, or Other Types of Cover

| Question | Response | Percent | Number of Responses |
|---|-----------------------------|-------------------|---------------------|
| Is the motorcycle stored under a patio cover, motorcycle cover, or other? | Patio Cover | 29.8% | 34 |
| | Motorcycle Cover | 49.1% | 56 |
| | Other | 20.2% | 23 |
| | Don't Know | 0.9% | 1 |
| | Total | 100% | 114 ^a |
| Where the motorcycle is stored if "other" was chosen. | Carport | 13.0% | 3 |
| | Garage | 4.3% | 1 |
| | No Cover | 4.3% | 1 |
| | Outside | 4.3% | 1 |
| | Outside on the street. | 8.7% | 2 |
| | Patio and motorcycle cover. | 4.3% | 1 |
| | Porch | 4.3% | 1 |
| | Unspecified | 56.5% | 13 |
| | Total | 100% ^b | 23 |

^a Only respondents who reported storing the motorcycle outside are included in this distribution.

^b Due to rounding percentages may not sum to 100%.

Table 23. Distribution of Respondents Who Modified Motorcycles' Original Design

| Response | Percent | Number of Responses |
|------------|-------------------|---------------------|
| Modified | 21.7% | 266 |
| Unmodified | 77.2% | 948 |
| Don't Know | 1.1% | 13 |
| Refused | 0.1% | 1 |
| Total | 100% ^a | 1,228 |

^a Due to rounding percentages may not sum to 100%.

Table 24. Number of Respondents Who Modified Motorcycles by Adding Exhausts with Catalysts

| Response | Percent | Number of Responses |
|-----------------------------------|---------|---------------------|
| Added Exhaust with Catalyst | 44.7% | 119 |
| Did Not Add Exhaust with Catalyst | 45.1% | 120 |
| Don't Know | 9.8% | 26 |
| Refused | 0.4% | 1 |
| Total | 100% | 266 ^a |

^a Only respondents who reported modifying the motorcycle are included in this table.

Table 25. Number of Respondents Who Modified Motorcycles by Adding Exhausts without Catalysts

| Response | Percent | Number of Responses |
|--------------------------------------|-------------------|---------------------|
| Added Exhaust without Catalyst | 32.0% | 47 |
| Did Not Add Exhaust without Catalyst | 46.3% | 68 |
| Don't Know | 21.1% | 31 |
| Refused | 0.7% | 1 |
| Total | 100% ^a | 147 ^b |

^a Due to rounding percentages may not sum to 100%.

^b Only respondents who reported modifying the motorcycle and did not add an exhaust with a catalyst are reported in this table.

Table 26. Number of Respondents Who Modified Motorcycles by Removing the Carbon Canister

| Response | Percent | Number of Responses |
|-------------|-------------------|---------------------|
| Removed | 11.7% | 31 |
| Not Removed | 71.8% | 191 |
| Don't Know | 16.2% | 43 |
| Refused | 0.4% | 1 |
| Total | 100% ^a | 266 ^b |

^a Due to rounding percentages may not sum to 100%.

^b Only respondents who reported modifying the motorcycle are included in this table.

Table 27. Distribution of Respondents Who Made Other Modifications

| Response | Percent | Number of Responses |
|-----------------------------|-------------------|---------------------|
| With Other Modifications | 41.4% | 110 |
| Without Other Modifications | 49.6% | 132 |
| Don't Know | 8.3% | 22 |
| Refused | 0.8% | 2 |
| Total | 100% ^a | 266 |

^a Due to rounding percentages may not sum to 100%.

^b Only respondents who reported modifying the motorcycle are included in this distribution.

Table 28. Number of Respondents Who Reported Owning and Using a 2nd Motorcycle in the Past 12 Months^{ab}

| Response | Percent | Number of Responses |
|---------------------|-------------------|---------------------|
| Yes | 21.7% | 267 |
| No | 77.2% | 948 |
| Don't Know/Not Used | 0.8% | 10 |
| Refused | 0.2% | 3 |
| Total | 100% ^c | 1,228 |

^a Of the 21.7% who reported owning and using a 2nd motorcycle in the past 12 months 85% completed an interview about the 2nd motorcycle. See Table 29 for 2nd motorcycle response rate.

^b 2nd Motorcycle data is not included in this report.

^c Due to rounding percentages may not sum to 100%.

Table 29. Number of Respondents Who Completed Interviews about a 2nd Motorcycle Owned and Used in the Past 12 Months^{ab}

| Disposition | Percent | Number of Cases |
|---------------------------------------|---------|-----------------|
| 2 nd MC Data ^{cd} | 66.9% | 198 |
| 2 nd MC Only ^d | 9.8% | 29 |
| Refusals | 23.3% | 69 |
| Total | 100% | 296 |

^a This is the response rate for 2nd motorcycle interviews. If the respondent was not qualified or refused to participate in the 1st motorcycle interview they were not asked about a 2nd motorcycle.

^b 2nd Motorcycle data is not included in this report.

^c 16.1% of respondents who completed an interview about the 1st motorcycle also completed an interview about a 2nd motorcycle.

^d 2nd MC Data refers to respondents who completed an interview about the 1st motorcycle obtained from the sampling frame and a 2nd motorcycle which they owned and used. 2nd MC Only refers to respondents who no longer own the 1st motorcycle but completed the interview about a 2nd motorcycle they owned and used in the past 12 months.

Appendix A: Survey Instrument

INTERVIEWER: PLEASE REVIEW THE CALL SCREEN, CHECK FOR MESSAGES AND DIAL THE NUMBER
IF SOMEONE ANSWERS ENTER 1 TO BEGIN THE INTERVIEW
IF NOT, ENTER CNTRL/END AND CODE APPROPRIATELY

INTERVIEWER NOTE: ANSWER-CHOICES THAT APPEAR IN CAPS SHOULD NOT BE READ TO RESPONDENT.
FOR EXAMPLE, DON'T KNOW OR REFUSED. ENTER 1 TO CONTINUE.

Q: HELLO

Hello my name is _____ and I am a student calling from California State University, Sacramento on behalf of the California Air Resources Board. We are collecting information about on-road motorcycles in the state of California. The questions are easy to answer and should only take about 5-7 minutes depending on your responses. All your answers are confidential and you may refuse to answer any questions at any time. I am calling about the <year>, <model>, registered to <owner>. Have you or someone in your household used this <motorcycle> in the past 12 months?

1. Yes
2. No, don't have <motorcycle> anymore (sold, gave away etc.)
3. No, have not used in past 12 months
4. No, owner has moved
5. No, wrong number, don't know anything about <motorcycle>
6. No, vehicle owner is deceased
7. DON'T KNOW
8. REFUSED

OTHER OWNER:

INTERVIEWER NOTE: ENTER NUMBER, THEN HIT ENTER TO CONTINUE.

IF (ANSWER = 2) SKIP to Q17

IF (ANSWER > 2) SKIP to NOTQAL

Q: Q81

May I please have the zipcode your motorcycle is registered in? _____

INTERVIEWER NOTE: FOR DON'T KNOW/REFUSED ENTER 99999.

Q: COUNTY1A

In which county is the <motorcycle> registered?

- | | | |
|-----------------|---------------------|-----------------------|
| 1. Alameda | 21. Marin | 41. San Mateo |
| 2. Alpine | 22. Mariposa | 42. Santa Barbara |
| 3. Amador | 23. Mendocino | 43. Santa Clara |
| 4. Butte | 24. Merced | 44. Santa Cruz |
| 5. Calaveras | 25. Modoc | 45. Shasta |
| 6. Colusa | 26. Mono | 46. Sierra |
| 7. Contra Costa | 27. Monterey | 47. Siskiyou |
| 8. Del Norte | 28. Napa | 48. Solano |
| 9. El Dorado | 29. Nevada | 49. Sonoma |
| 10. Fresno | 30. Orange | 50. Stanislaus |
| 11. Glenn | 31. Placer | 51. Sutter |
| 12. Humboldt | 32. Plumas | 52. Tehama |
| 13. Imperial | 33. Riverside | 53. Trinity |
| 14. Inyo | 34. Sacramento | 54. Tulare |
| 15. Kern | 35. San Benito | 55. Tuolumne |
| 16. Kings | 36. San Bernardino | 56. Ventura |
| 17. Lake | 37. San Diego | 57. Yolo |
| 18. Lassen | 38. San Francisco | 58. Yuba |
| 19. Los Angeles | 39. San Joaquin | 59. Don't Know County |
| 20. Madera | 40. San Luis Obispo | 60. Refused |
| | | 61. Out of state |

INTERVIEWER NOTE: ENTER NUMBER THAT CORRESPONDS WITH COUNTY, THEN HIT ENTER.

Q: Q1

Does the <motorcycle> use a carburetor or fuel injection?

1. Carburetor
2. Fuel injection
3. DON'T KNOW
4. REFUSED

Q: Q2

What type of fuel do you use in the <motorcycle>?

1. Gasoline
2. Diesel
3. Electric
4. DON'T KNOW
5. REFUSED

IF (ANSWER = 3) SKIP to NOTQAL

Q: TRANS1

My next few questions are about your usage of the <motorcycle> in the last 12 months.

INTERVIEWER NOTE: ENTER 1 TO CONTINUE

Q: Q3

About how many days did you operate the <motorcycle> in the last 12 months?

INTERVIEWER NOTE: IF RESPONDENT GIVES A NON-NUMERIC ANSWER, (i.e. I RIDE IN SUMMER AND FALL OR I RIDE ON WEEKENDS.) PLEASE USE 'CHEAT SHEET' TO ESTIMATE THE # OF DAYS USED DURING THE LAST 12 MONTHS. READ THE ESTIMATED NUMBER TO RESPONDENT FOR CONFIRMATION. IF RESPONDENT SAYS DON'T KNOW ENTER 998 AND FOR REFUSED ENTER 999. IF RESPONDENT SAYS "I DID NOT USE IN PAST 12 MONTHS", THEY ARE NOT QUALIFIED, ENTER 0 AND YOU WILL CONTINUE TO ASK IF THEY HAVE OTHER MOTORCYCLES THEY HAVE USED IN PAST 12 MONTHS.

IF (ANSWER = 0) SKIP to Q17

Q: Q4

On a typical day of use, approximately how many times do you start the <motorcycle>?

INTERVIEWER NOTE: IF RESPONDENT SAYS DON'T KNOW ENTER 998 AND FOR REFUSED ENTER 999.

Q: Q4A

On a typical day of use, how many miles do you ride the <motorcycle>? ___ Miles Per Day

INTERVIEWER NOTE: IF RESPONDENT SAYS DON'T KNOW ENTER 9998 AND FOR REFUSED ENTER 9999.

Q: Q5

Do you usually use the <motorcycle> for commuting, recreation, or both?

1. Commuting
2. Recreation
3. Both
4. DON'T KNOW
5. REFUSED

Q: Q6

Do you typically ride the <motorcycle> on weekdays only, weekends only, or both?

1. Weekdays only (Mon-Fri)
2. Weekends only (Sat-Sun)
3. Both (Mon-Sun)
4. DON'T KNOW
5. REFUSED

IF (ANSWER < 3) SKIP to Q8

IF (ANSWER > 3) SKIP to Q8

Q: Q7

Could you please estimate the percent of time you use the <motorcycle> on the weekends versus the weekdays?

1. Weekends _____
2. Weekdays _____
3. DON'T KNOW/REFUSED

TOTAL:

INTERVIEWER NOTE: THE TOTAL MUST EQUAL 100 PERCENT. IF THE RESPONDENT ANSWERS DON'T KNOW/REFUSED, ENTER 100 FOR DON'T KNOW/REFUSED, AND 0 FOR ALL ELSE. IF YOU ARE MAKING CORRECTIONS TO RESPONDENT ANSWERS, YOU MUST PRESS 'PREV' FOR EACH NUMERIC ANSWER YOU WISH TO CORRECT. FOR EXAMPLE, IF YOU HAVE ALREADY ADVANCED TO Q8 BUT NEED TO CORRECT THE 'WEEKENDS' ANSWER FOR Q7, YOU MUST PRESS 'PREV' ONCE TO GO BACK TO Q7, THEN TWO MORE TIMES TO GET TO THE NUMERIC ANSWER FOR 'WEEKENDS'.

Q: Q8

In which seasons do you use the <motorcycle>?

1. Winter: Dec-Jan-Feb
2. Spring: Mar-Apr-May
3. Summer: Jun-Jul-Aug
4. Fall: Sep-Oct-Nov
5. DON'T KNOW
6. REFUSED

INTERVIEWER NOTE: SELECT ALL THAT APPLY

Q: Q8A

Please estimate the percentage you use the <motorcycle> in each of the following seasons?

1. Winter _____
2. Spring _____
3. Summer _____
4. Fall _____
5. DON'T KNOW/REFUSED

TOTAL:

INTERVIEWER NOTE: THE TOTAL MUST EQUAL 100 PERCENT. IF THE RESPONDENT ANSWERS DON'T KNOW/REFUSED, ENTER 100 FOR DON'T KNOW/REFUSED, AND 0 FOR ALL ELSE.

Q: Q9

Do you primarily use the <motorcycle> In-state, Out-of-state, or Both?

1. In-state
2. Out-of-state
3. Both
4. DON'T KNOW
5. REFUSED

INTERVIEWER NOTE: IF RESPONDENT SAYS THEY TAKE AN ANNUAL OUT-OF-STATE TRIP THEN ASK IF 'BOTH' IS AN APPORPIRATE ANSWER.

IF (ANSWER < 3) SKIP to Q10

IF (ANSWER = 4) SKIP to Q10

IF (ANSWER = 5) SKIP to Q10

Q: Q9A

Could you please estimate the percentage you use the <motorcycle> in-state versus out-of-state?

1. In-state _____
2. Out-of-state _____
3. DON'T KNOW/REFUSED

TOTAL:

INTERVIEWER NOTE: THE TOTAL MUST EQUAL 100 PERCENT.

Q: Q10

What is the size of the <motorcycle> fuel tank? _____ Gallons

INTERVIEWER NOTE: IF RESPONDENT ANSWERS IN A FRACTION, ENTER AS A DECIMAL. FOR EXAMPLE, FIVE AND THREE-QUARTERS = 5.75, FIVE AND ONE-HALF = 5.5, FIVE AND ONE-QUARTER = 5.25. IF RESPONDENT SAYS DON'T KNOW ENTER 998 AND FOR REFUSED ENTER 999.

Q: Q11

Does the <motorcycle> currently have fuel in the tank?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

If (ANSWER > 1) SKIP to TRANS2

Q: Q11A

Please estimate how full the <motorcycle> fuel tank currently is. Is it full, $\frac{3}{4}$ full, $\frac{1}{2}$ full, or $\frac{1}{4}$ full?

1. FULL
2. $\frac{3}{4}$ FULL
3. $\frac{1}{2}$ FULL
4. $\frac{1}{4}$ FULL
5. DON'T KNOW
6. REFUSED

Q: TRANS2

My next couple of questions are about the storage of the <motorcycle> when not in use.

INTERVIEWER NOTE: ENTER 1 TO CONTINUE.

Q: Q12

Do you store the <motorcycle> inside or outside?

1. INSIDE
2. OUTSIDE
3. DON'T KNOW
4. REFUSED

INTERVIEWER NOTE: ENTER NUMBER AND HIT ENTER TO CONTINUE

IF (ANSWER = 2) SKIP to Q14

IF (ANSWER > 2) SKIP to TRANS3

Q: Q13

Is the <motorcycle> stored in a garage, shed, or other building?

1. Garage
2. Shed
3. Other _____
4. DON'T KNOW
5. REFUSED

INTERVIEWER NOTE: IF OTHER, ENTER 3 AND TYPE RESPONSE IN WINDOW.

IF (ANSWER > 1) SKIP to TRANS3

Q: Q13A

Does the garage, where the <motorcycle> is kept, have insulation?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

SKIP to TRANS3

Q: Q14

Is the <motorcycle> stored under a patio cover, motorcycle cover, or other?

1. Patio Cover
2. Motorcycle Cover
3. Other
4. REFUSED
5. DON'T KNOW

INTERVIEWER NOTE: IF OTHER, ENTER 3 AND THEN TYPE RESPONSE IN THE WINDOW.

Q: TRANS3

At this point in the survey I would like to remind you that all of your answers are confidential and that your identity will not be shared.

INTERVIEWER NOTE: ENTER 1 TO CONTINUE

Q: Q15

Has the <motorcycle> been modified from its original design?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER > 1) SKIP to Q17

Q: Q16

Did you add an aftermarket exhaust with a catalyst?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER = 1) SKIP to Q16B

Q: Q16A

Did you add an aftermarket exhaust without a catalyst?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

Q: Q16B

Did you remove the carbon canister?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

Q: Q16C

Were any other aftermarket changes made?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER > 1) SKIP to Q17

Q: Q16D

What were the other aftermarket changes you made? (Open-ended response)

INTERVIEWER NOTE: HIT ENTER TWICE SLOWLY TO CONTINUE OR CLICK NEXT. BE AWARE OF ACCIDENTALLY SKIPPING Q17!

Q: Q17

Do you own any other on-road motorcycles, YOU HAVE USED IN PAST 12 MONTHS?

1. YES
2. NO
3. HAVE NOT USED IN PAST 12 MONTHS
3. DON'T KNOW
4. REFUSED

INTERVIEWER NOTE: WE ARE ONLY COLLECTING INFORMATION FOR GAS OR DIESEL FUELED MOTORCYCLES NOT ELECTRIC POWERED MOTORCYCLES.

IF (HELLO = 1 & Q17 > 1) SKIP to AGE

IF (HELLO = 2 & Q17 > 1) SKIP to NOTQAL

IF (HELLO = 2 & Q17 < 1) SKIP to Q18

IF (HELLO = 1) SKIP to Q18

Q: Q17A

May I speak with the registered owner or the person that is familiar with or most often uses the motorcycle?

1. OWNER AGREES TO BE INTERVIEWED
2. ANOTHER PERSON AGREES TO BE INTERVIEWED
3. APPROPRIATE PERSON IS NOT AVAILABLE (SCHEDULE CALLBACK MAKE NOTE OF DIFFERENT MOTORCYCLE)

INTERVIEWER NOTE: REMEMBER TO HIT DEFINITE WHEN SCHEDULING A CALLBACK.

IF (ANSWER = 3) CTRLEND

IF (HELLO = 2) SKIP to Q281

Q: Q18

I would like to ask you about your other on-road motorcycles; this should only take a few more minutes now that you are familiar with the questions. Would that be okay?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER > 1) SKIP to AGE

IF (HELLO = 1) SKIP to Q190THMOT

Q: Q281

May I please have your zip code? _____

INTERVIEWER NOTE: FOR DON'T KNOW/REFUSED ENTER 99999.

Q: COUNTY1B

In which county is the <motorcycle> registered?

- | | | |
|-----------------|---------------------|-----------------------|
| 1. Alameda | 21. Marin | 41. San Mateo |
| 2. Alpine | 22. Mariposa | 42. Santa Barbara |
| 3. Amador | 23. Mendocino | 43. Santa Clara |
| 4. Butte | 24. Merced | 44. Santa Cruz |
| 5. Calaveras | 25. Modoc | 45. Shasta |
| 6. Colusa | 26. Mono | 46. Sierra |
| 7. Contra Costa | 27. Monterey | 47. Siskiyou |
| 8. Del Norte | 28. Napa | 48. Solano |
| 9. El Dorado | 29. Nevada | 49. Sonoma |
| 10. Fresno | 30. Orange | 50. Stanislaus |
| 11. Glenn | 31. Placer | 51. Sutter |
| 12. Humboldt | 32. Plumas | 52. Tehama |
| 13. Imperial | 33. Riverside | 53. Trinity |
| 14. Inyo | 34. Sacramento | 54. Tulare |
| 15. Kern | 35. San Benito | 55. Tuolumne |
| 16. Kings | 36. San Bernardino | 56. Ventura |
| 17. Lake | 37. San Diego | 57. Yolo |
| 18. Lassen | 38. San Francisco | 58. Yuba |
| 19. Los Angeles | 39. San Joaquin | 59. Don't Know County |
| 20. Madera | 40. San Luis Obispo | 60. Refused |
| | | 61. Out of state |

INTERVIEWER NOTE: ENTER NUMBER THAT CORRESPONDS WITH COUNTY, THEN HIT ENTER.

Q: Q190THMOT

What is the year for this motorcycle?

INTERVIEWER NOTE: ENTER IN YYYY FORMAT. FOR EXAMPLE, 1984.

Q: Q200THMOT

What is the make for this motorcycle?

INTERVIEWER NOTE: PRESS ENTER TWICE TO CONTINUE OR CLICK NEXT.

Q: Q210THMOT

What is the model for this motorcycle?

INTERVIEWER NOTE: PRESS ENTER TWICE TO CONTINUE OR CLICK NEXT.

IF (HELLO = 2) SKIP to QB1

Q: Q220THMOT

Is any of the usage or storage information for the <MAKE2> different than the information I have already collected?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER > 1) SKIP to AGE

Q: QB1

Does the <motorcycle> use a carburetor or fuel injection?

1. Carburetor
2. Fuel injection
3. DON'T KNOW
4. REFUSED

Q: QB2

What type of fuel do you use in the <motorcycle>?

1. Gasoline
2. Diesel
3. Electric
4. DON'T KNOW
5. REFUSED

IF (ANSWER = 1) SKIP to QB3

IF (ANSWER = 2) SKIP to QB3

IF (ANSWER = 4) SKIP to QB3

IF (ANSWER = 5) SKIP to QB3

Q: QB2A

Do you own another motorcycle that is not electric?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER > 1) SKIP to AGE

Q: Q219OTH

What is the year for this motorcycle?

INTERVIEWER NOTE: ENTER IN YYYY FORMAT. FOR EXAMPLE, 1984.

Q: Q2200TH

What is the make for this motorcycle?

INTERVIEWER NOTE: PRESS ENTER TWICE TO CONTINUE.

Q: Q2220TH

Is any of the usage or storage information for the <MAKE2> different than the information I have already collected?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER > 1) SKIP to AGE

Q: Q2B1

Does the <motorcycle> use a carburetor or fuel injection?

1. Carburetor
2. Fuel injection
3. DON'T KNOW
4. REFUSED

Q: Q2B2

What type of fuel do you use in the <motorcycle>?

1. Gasoline
2. Diesel
3. DON'T KNOW
4. REFUSED

Q: QB3

About how many days did you operate the <motorcycle> in the last 12 months?

INTERVIEWER NOTE: IF RESPONDENT GIVES A NON-NUMERIC ANSWER, (i.e. I RIDE IN SUMMER AND FALL OR I RIDE ON WEEKENDS.) PLEASE USE 'CHEAT SHEET' TO ESTIMATE THE # OF DAYS USED DURING THE LAST 12 MONTHS. READ THE ESTIMATED NUMBER TO RESPONDENT FOR CONFIRMATION. IF RESPONDENT SAYS DON'T KNOW ENTER 998 AND FOR REFUSED ENTER 999.

Q: QB4

On a typical day of use, approximately how many times do you start the <motorcycle>?

INTERVIEWER NOTE: IF RESPONDENT SAYS DON'T KNOW ENTER 998 AND FOR REFUSED ENTER 999.

Q: QB4A

On a typical day of use, how many miles do you ride the <motorcycle>? ___Miles Per Day

INTERVIEWER NOTE: IF RESPONDENT SAYS DON'T KNOW ENTER 9998 AND FOR REFUSED ENTER 9999.

Q: QB5

Do you usually use the <motorcycle> for commuting, recreation, or both?

1. Commuting
2. Recreation
3. Both
4. DON'T KNOW
5. REFUSED

Q: QB6

Do you typically ride the <motorcycle> on weekends only, weekdays only, or both/

1. Weekends only (Sat-Sun)
2. Weekdays only (Mon-Fri)
3. Both (Mon-Sun)
4. DON'T KNOW
5. REFUSED

IF (ANSWER < 3) SKIP to QB8

IF (ANSWER > 3) SKIP to QB8

Q: QB7

Could you please estimate the percent of time you use the <motorcycle> on the weekends compared to the weekdays?

1. Weekends _____
2. Weekdays _____
3. DON'T KNOW/REFUSED

TOTAL:

INTERVIEWER NOTE: THE TOTAL MUST EQUAL 100 PERCENT. IF THE RESPONDENT ANSWERS DON'T KNOW/REFUSED, ENTER 100 FOR DON'T KNOW/REFUSED, AND 0 FOR ALL ELSE.

Q: QB8

In which seasons do you use the <motorcycle>?

1. Winter: Dec-Jan-Feb
2. Spring: Mar-Apr-May
3. Summer: Jun-Jul-Aug
4. Fall: Sep-Oct-Nov
5. DON'T KNOW
6. REFUSED

INTERVIEWER NOTE: SELECT ALL THAT APPLY

Q: QB8A

Please estimate the percentage you use the <motorcycle> in each of the following seasons?

1. Winter _____
2. Spring _____
3. Summer _____
4. Fall _____
5. DON'T KNOW/REFUSED

TOTAL:

INTERVIEWER NOTE: THE TOTAL MUST EQUAL 100 PERCENT. IF THE RESPONDENT ANSWERS DON'T KNOW/REFUSED, ENTER 100 FOR DON'T KNOW/REFUSED, AND 0 FOR ALL ELSE.

Q: QB9

Do you primarily use the <motorcycle> In-state, Out-of-state, or Both?

1. In-state
2. Out-of-state
3. Both
4. DON'T KNOW
5. REFUSED

INTERVIEWER NOTE: IF RESPONDENT SAYS THEY TAKE AN ANNUAL OUT-OF-STATE TRIP THEN ASK IF 'BOTH' IS AN APPORPIRATE ANSWER.

IF (ANSWER ≠ 3) SKIP to QB10

Q: QB9A

Could you please estimate the percentage you use the <motorcycle> in-state versus out-of-state?

1. In-state _____
2. Out-of-state _____
3. DON'T KNOW/REFUSED

TOTAL:

INTERVIEWER NOTE: THE TOTAL MUST EQUAL 100 PERCENT.

Q: QB10

What is the size of the <motorcycle> fuel tank? _____ Gallons

INTERVIEWER NOTE: IF RESPONDENT ANSWERS IN A FRACTION, ENTER AS A DECIMAL. FOR EXAMPLE, FIVE AND THREE-QUARTERS = 5.75, FIVE AND ONE-HALF = 5.5, FIVE AND ONE-QUARTER = 5.25. IF RESPONDENT SAYS DON'T KNOW ENTER 998 AND FOR REFUSED ENTER 999.

Q: QB11

Does the <motorcycle> currently have fuel in the tank?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

If (ANSWER > 1) SKIP to QB12

Q: QB11A

Please estimate how full the <motorcycle> tank currently is. Is it full, $\frac{3}{4}$ full, $\frac{1}{2}$ full, or $\frac{1}{4}$ full?

1. FULL
2. $\frac{3}{4}$ FULL
3. $\frac{1}{2}$ FULL
4. $\frac{1}{4}$ FULL
5. DON'T KNOW
6. REFUSED

Q: QB12

Do you store the <motorcycle> inside or outside?

1. Inside
2. Outside
3. DON'T KNOW
4. REFUSED

IF (ANSWER = 2) SKIP to QB14

IF (ANSWER > 2) SKIP to BTRANSITION2

Q: QB13

Is the <motorcycle> stored in a garage, shed, or other building?

1. Garage
2. Shed
3. Other _____
4. DON'T KNOW
5. REFUSED

INTERVIEWER NOTE: IF OTHER, ENTER 3 AND TYPE RESPONSE IN WINDOW.

IF (ANSWER > 1) SKIP to QB14

Q: QB13A

Does the garage, where the <motorcycle> is kept, have insulation?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

SKIP to BTRANSITION2

Q: QB14

Is the <motorcycle> stored under a patio cover, motorcycle cover, or other?

1. Patio Cover
2. Motorcycle Cover
3. Other
4. REFUSED
5. DON'T KNOW

INTERVIEWER NOTE: IF OTHER, ENTER 3 AND THEN TYPE RESPONSE IN WINDOW.

Q: BTRANSITION2

I would like to remind you that all of your answers are confidential and that your identity will not be shared.

INTERVIEWER NOTE: ENTER 1 TO CONTINUE

Q: QB15

Has the <MAKE2> been modified from its original design?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER \neq 1) SKIP to AGE

Q: QB16

Did you add an aftermarket exhaust with a catalyst?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER = 1) SKIP to QB16B

Q: QB16A

Did you add an aftermarket exhaust without a catalyst?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

Q: QB16B

Did you remove the carbon canister?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

Q: QB16C

Were there any other aftermarket changes?

1. YES
2. NO
3. DON'T KNOW
4. REFUSED

IF (ANSWER > 1) SKIP to AGE

Q: QB16D

What were the other aftermarket changes you made? (Open-ended response)

INTERVIEWER NOTE: HIT ENTER TWICE TO CONTINUE.

Q: AGE

In order to ensure our sample is representative of the state of California may I please ask which of the following age groups includes you?

1. Under 18
2. 18-24
3. 25-44
4. 45-64
5. 65+
6. DON'T KNOW
7. REFUSED

Q: GEND

What is your gender?

1. Male
2. Female
3. DON'T KNOW
4. REFUSED

Q: PHONE

Are we on your landline or cell phone?

1. LANDLINE
2. CELL
3. REFUSED

Q: END SCRIPT

Thank you for your time, those are all the questions I have for you. If you are interested in learning more about this study you can visit the Air Resources Board online at www.arb.ca.gov.

INTERVIEWER NOTE: HIT 1 TO END

Q: NOTQAL

I'm sorry. You are not eligible for the study. Thank you for your time.

INTERVIEWER NOTE: HIT 1 TO END